

## **1. Data Summary:**

### **NOAA Atmospheric Analyses Product**

Local Analysis and Prediction System (**LAPS**), run by NOAA's Forecast Systems Laboratory (**FSL**).

<http://laps.fsl.noaa.gov/>

Combines a model with numerous observed meteorological data sets (e.g., sfc obs, Doppler radar, wind and T from RASS profiles, satellite obs) to produce a collection of spatially- and temporally-continuous atmospheric and land-based analysis fields.

## **2. Spatial Extent:**

All of Colorado and Wyoming, parts of Utah, Idaho, Montana, South Dakota, Nebraska, Kansas, Oklahoma, Texas, New Mexico, and Arizona.

10-km horizontal grid, 21 vertical levels.

Hourly temporal resolution.

## **3. Temporal Extent:**

1 September 2001 through 31 August 2004 (3 full years of continuous data).

## **4. Data Processing:**

FSL will provide me with their entire data archive for the 3 years, in 3-month segments, approximately one month late (e.g., I will receive September-November in December).

From this I will extract the data we want (see variable list).

This will reduce the data set from ~200 Mb per day to ~75 Mb per day, or 30 Gb per year of data.

## **5. Data Format and Description:**

The data will be in NetCDF format.

## **6. Data Volume:**

30 Gb per year, 90 Gb for the entire 3-year data set.

## **7. Data Management:**

No management is required (see below).

## **8. Data Availability, Propriety Data, Data Embargo:**

These data sets can be made publicly available as soon as I have extracted the CLPX subset from the original data.

# HOURLY LAPS OUTPUT VARIABLES and # of LEVELS

1	Surface wind u (grid north)	1	Cloud Cover
1	Surface wind u (grid north)	1	Cloud Analysis Implied Snow Cover
1	Surface wind v (grid north)	21	Fractional Cloud Cover Pressure Coord
1	1500m Pressure	21	Cloud Liquid Water
1	Temp	21	Cloud Ice
1	Dewpt Temp	21	Hydrometeor Concentration
1	Vertical Velocity	21	Rain Concentration
1	Relative Humidity	21	Snow Concentration
1	MSL Pressure	21	Precipitating Ice Concentration
1	Temp Advection	1	Integrated Liquid Water
1	Potential Temp	1	Sfc Precip Type
1	Equivalent Potential Temp	1	LAPS Sfc Precip Type
1	Pressure	1	Sfc Cloud Type
1	Vorticity	21	Mean Cloud Drop Diameter
1	Mixing Ratio	21	Cloud omega
1	Moisture Convergence	21	Icing Index
1	Divergence	21	Cloud Type
1	Potential Temp Advection	21	Precip Type
1	Moisture Advection	1	Max Echo Tops
1	Surface Wind Speed	1	Low Level Reflectivity
1	CSSI	1	Lifted Index
1	Surface Visibility	1	Positive Bouyant Energy
1	Fire Danger	1	Negative Bouyant Energy
1	Heat Index	1	Surface wind u
21	Temperature	1	Surface wind v
21	Height	1	Helicity
1	Snow Accum Cycle	1	Mean wind u
1	Snow Accum Storm Tot	1	Mean wind v
1	Liq Accum Cycle	1	log(LI*omega)
1	Liq Accum Storm Tot	1	600mb omega
21	Specific Humidity	1	Max Radar Reflectivity
21	Relative Humidity	3	Soil Moisture
21	Relative Humidity with resp to liquid	1	Cumulative Infiltration Volume
1	Integrated Total Precipitable Water	1	Depth to wetting front
21	Wind u (wrt GRID NORTH)	1	Wet/Dry grid point
21	Wind v (wrt GRID EAST)	1	Evaporation Data
21	Wind omega	1	Snow covered
42	Fractional Cloud Cover (levels 1-42)	1	Snow melt
1	Cloud base	1	Soil Moisture content Wetting Front
1	Cloud Top		
1	Cloud Ceiling		